UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|--------------------------|----------------------|------------------------------|------------------|
| 10/540,729 | 06/24/2005 | Stephane Taunier | 16721-0290 (42528-317078) | 8990 |
| JOHN S. PRAT | 7590 12/26/200 T. ESO | | EXAMINER | |
| KILPATRICK STOCKTON, LLP | | | PHASGE, ARUN S | |
| 1100 PEACHTREE STREET ATLANTA, GA 30309 | | | ART UNIT | PAPER NUMBER |
| | | | 1795 | |
| | | | | |
| | | | MAIL DATE | DELIVERY MODE |
| | | | 12/26/2008 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | Application No. | Applicant(s) | | | |
|--|---|-----------------------|--|--|--|
| Office Action Comments | 10/540,729 | TAUNIER ET AL. | | | |
| Office Action Summary | Examiner | Art Unit | | | |
| | Arun S. Phasge | 1795 | | | |
| The MAILING DATE of this communication app Period for Reply | ears on the cover sheet with the c | orrespondence address | | | |
| A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). | | | | | |
| Status | | | | | |
| 1) Responsive to communication(s) filed on | | | | | |
| | | | | | |
| | ·— | | | | |
| closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213. | | | | | |
| dissect in assertations with the practice and in | x parte quayre, 1000 0.D. 11, 10 | 0.0.210. | | | |
| Disposition of Claims | | | | | |
| 4)⊠ Claim(s) <u>11-20</u> is/are pending in the application. | | | | | |
| 4a) Of the above claim(s) is/are withdrawn from consideration. | | | | | |
| 5) Claim(s) is/are allowed. | | | | | |
| 6)⊠ Claim(s) <u>11-20</u> is/are rejected. | | | | | |
| 7) Claim(s) is/are objected to. | | | | | |
| 8) Claim(s) are subject to restriction and/or election requirement. | | | | | |
| | | | | | |
| Application Papers | | | | | |
| 9)☐ The specification is objected to by the Examiner. | | | | | |
| 10)☐ The drawing(s) filed on is/are: a)☐ accepted or b)☐ objected to by the Examiner. | | | | | |
| Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). | | | | | |
| Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). | | | | | |
| 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. | | | | | |
| Priority under 35 U.S.C. § 119 | | | | | |
| 12)⊠ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a)⊠ All b)□ Some * c)□ None of: | | | | | |
| ·— ·— ·— | | | | | |
| 2.☐ Certified copies of the priority documents | | on No. | | | |
| | | | | | |
| _ . | application from the International Bureau (PCT Rule 17.2(a)). | | | | |
| * See the attached detailed Office action for a list of the certified copies not received. | | | | | |
| 355 the attached detailed office action for a list of the certified copies not received. | | | | | |
| | | | | | |
| Attachment(s) | | | | | |
| 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) | | | | | |
| 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. | | | | | |
| 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 9/10/05. 5) Notice of Informal Patent Application 6) Other: | | | | | |
| 1 apei 140(3)/iviali Date <u>3/10/00.</u> 0) | | | | | |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-14, 16, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obreja et al. (Obreja), article entitled, "Preparation and Properties of Electrodeposited InSe and CuSe Thin Films in view of Tsuji et al. (Tsuji), U.S. Patent 6,607,653.

The Obreja reference discloses the claimed method of producing the same compound by electrochemistry comprising providing the metal salts in an electrolysis bath with two electrodes, applying a potential to deposit the film, wherein the reference teaches the addition of a compound such as citric acid (see pages 233-234)

The reference fails to disclose the specific claimed additive.

The Tsuji patent teaches the addition of the claimed additive to the plating baths of copper containing alloy elements (see claims 1-15 and col. 21, lines 30-35 and col. 23, lines 28-42).

Therefore, the claims as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the disclosure of the Obreja reference with the teachings of the secondary reference, because the patent teaches that copper containing alloys benefit form the addition of the claimed additives.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Obreja in view of Tsuji as applied to claims above, and further in view of Emmenegger, U.S. Patent 4,980,035.

The reference fails to disclose the specific claimed additive.

The Emmenegger patent teaches the addition of the claimed additive to the plating baths of copper containing alloy elements (see claim 8).

Consequently, the claims as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the disclosure of the Obreja reference with the teachings of the secondary reference, because the patent teaches that copper containing alloys benefit form the addition of the claimed additives.

Claims 11, 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obreja as applied to claims above, and further in view of Schwartz et al. (Schwartz), U.S. Patent 3,460,953.

The reference fails to disclose the specific claimed additive.

The Schwartz patent teaches the addition of the claimed additive to the plating baths of copper containing alloy elements (see col. 1, lines 60-66).

Therefore, the claims as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the disclosure of the Obreja reference with the teachings of the secondary reference, because the patent teaches that copper containing alloys benefit form the addition of the claimed additives.

Claims 11, 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obreja as applied to claims above, and further in view of Aso et al. (Aso), U.S. Patent 5,534,128.

The reference fails to disclose the specific claimed additive.

The Aso patent teaches the addition of the claimed additive to the plating baths of copper containing alloy elements (see col. 5, lines 55-62).

Consequently, the claims as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the disclosure of the Obreja reference with the teachings of the secondary reference, because the patent teaches that copper containing alloys benefit form the addition of the claimed additives.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun S. Phasge whose telephone number is (571) 272-1345. The examiner can normally be reached on MONDAY-THURSDAY, 7:30-6:00.

Art Unit: 1795

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Nam X. Nguyen can be reached on (571) 272-1342. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Arun S. Phasge/

Primary Examiner, Art Unit 1795

asp